WHAT IS CLAIMED IS:

1. A method of evaluating a cell's metastatic propensity, said method comprising:

assaying said cell for the presence of at least one target protein associated with cellular locomotion to obtain a result; and

using said result to evaluate said cell's metastatic propensity.

2. The method according to Claim 1, wherein said at least one target protein is a nucleus-associated ribbon-like structure protein.

3. The method according to Claim 1, wherein said nucleus-associated ribbon-like structure protein is chosen from:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

4. The method according to Claim 1, wherein said at least one target protein is a leading edge cellular locomotion protein.

5. The method according to Claim 4, wherein said leading edge cellular locomotion protein is Neurotrophic tyrosine kinase receptor type 2 (NTRK2/TrkB).

6. The method according to Claim 1, wherein said assaying comprises assaying said cell for the presence of at least two different target proteins in said cell.

7. The method according to Claim 1, wherein said assay comprises assaying said cell for the presence of a nucleus-associated ribbon-like structure.

8. The method according to Claim 7, wherein said nucleus-associated ribbon-like structure comprises:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

9. The method according to Claim 1, wherein said cell is a neoplastic cell.

10. The method according to Claim 9, wherein said neoplastic cell is a tumor cell.

11. The method according to Claim 10, wherein said tumor cell is from a tumor harvested from a subject suffering from a neoplastic disease.

12. The method according to Claim 11, wherein said neoplastic disease is a lung cancer.

13. The method according to Claim 12, wherein said lung cancer is adenocarcinoma.

14. A method of making a prognosis for a subject suffering from a neoplastic disease, said method comprising:

assaying a cell obtained from said subject for the presence of at least one target protein associated with cellular locomotion to obtain a result; and

using said result to make a prognosis for said subject.

15. The method according to Claim 14, wherein said at least one target protein is a nucleus-associated ribbon-like structure protein.

16. The method according to Claim 15, wherein said nucleus-associated ribbon-like structure protein is chosen from:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);
Hs.516830 (C20orf139);
cyp4 proteins; and
Tripartite-containing motif 29 (TRIM29).

17. The method according to Claim 14, wherein said at least one target protein is a leading edge cellular locomotion protein.

18. The method according to Claim 17, wherein said leading edge cellular locomotion protein is Neurotrophic tyrosine kinase receptor type 2 (NTRK2/TrkB).

19. The method according to Claim 14, wherein said assaying comprises assaying said cell for the presence of at least two different cellular locomotion proteins in said cell.

20. The method according to Claim 14, wherein said assaying comprises assaying said cell for the presence of a nucleus-associated ribbon-like structure.

21. The method according to Claim 20, wherein said nucleus-associated ribbon-like structure comprises:
Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);
Pregnancy-induced growth inhibitor (OKL38);
Hs.516830 (C20orf139);
cyp4 proteins; and
Tripartite-containing motif 29 (TRIM29).

22. The method according to Claim 14, wherein said cell obtained from said subject is a neoplastic cell.

23. The method according to Claim 22, wherein said neoplastic cell is a tumor cell.

24. The method according to Claim 23, wherein said tumor cell is from a tumor harvested from said subject.

25. The method according to Claim 14, wherein said neoplastic disease is a lung cancer.

26. The method according to Claim 25, wherein said lung cancer is adenocarcinoma.

27. A method of modulating movement of a neoplastic cell from a first to a second location, said method comprising:

contacting said cell with an effective amount of an agent that modulates the activity of at least target protein associated with cellular locomotion in said cell to modulate movement of said cell from a first to a second location.

28. The method according to Claim 27, wherein said modulating movement comprises inhibiting movement.

29. The method according to Claim 28, wherein said agent at least reduces the activity of at least one target protein associated with cellular locomotion .

30. The method according to Claim 29, wherein said at least one target protein is a nucleus-associated ribbon-like structure protein.

31. The method according to Claim 30, wherein said nucleus-associated ribbon-like structure protein is chosen from:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

32. The method according to Claim 31, wherein said at least one target protein is a leading edge cellular locomotion protein.

33. The method according to Claim 32, wherein said leading edge cellular locomotion protein is Neurotrophic tyrosine kinase receptor type 2 (NTRK2/TrkB).

34. The method according to Claim 27, wherein said agent inhibits the formation of a nucleus-associated ribbon-like structure in said cell.

35. The method according to Claim 34, wherein said nucleus-associated ribbon-like structure comprises:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

36. The method according to Claim 27, wherein said neoplastic cell is a tumor cell.

37. The method according to Claim 36, wherein said tumor cell is from a tumor harvested from a subject suffering from a neoplastic disease.

38. The method according to Claim 37, wherein said neoplastic disease is a lung cancer.

39. The method according to Claim 38, wherein said lung cancer is adenocarcinoma.

40. A method of treating a subject suffering from a neoplastic disease condition, said method comprising:

administering to said subject an effective amount of an agent that modulates the activity of at least one target protein associated with cellular locomotion to treat said subject.

41. The method according to Claim 40, wherein said agent at least reduces the activity of at least one target protein associated with cellular locomotion .

42. The method according to Claim 40, wherein said at least one target protein is a nucleus-associated ribbon-like structure protein.

43. The method according to Claim 42, wherein said nucleus-associated ribbon-like structure protein is chosen from:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);
Pregnancy-induced growth inhibitor (OKL38);
Hs.516830 (C20orf139);
cyp4 proteins; and
Tripartite-containing motif 29 (TRIM29).

44. The method according to Claim 40, wherein said at least one target protein is a leading edge cellular locomotion protein.

45. The method according to Claim 44, wherein said leading edge cellular locomotion protein is Neurotrophic tyrosine kinase receptor type 2 (NTRK2/TrkB).

46. The method according to Claim 40, wherein said agent inhibits the formation of a nucleus-associated ribbon-like structure in said cell.

47. The method according to Claim 46, wherein said nucleus-associated ribbon-like structure comprises:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);
Pregnancy-induced growth inhibitor (OKL38);
Hs.516830 (C20orf139);
cyp4 proteins; and
Tripartite-containing motif 29 (TRIM29).

48. The method according to Claim 40, wherein said neoplastic disease is a lung cancer.

49. The method according to Claim 48, wherein said lung cancer is adenocarcinoma.

50. The method according to Claim 40, wherein said method further comprises administering to said subject a chromatin function inhibiting agent.

51. The method according to Claim 50, wherein said chromatin function inhibiting agent is a microtubule function inhibitor.

52. The method according to claim 51, wherein said microtubule function inhibitor is a taxane.

53. The method according to Claim 52, wherein said taxane is paclitaxel.

54. The method according to Claim 53, wherein said taxane is a paclitaxel analog.

55. A kit for use in evaluating a cell's metastatic propensity, said kit comprising:

a reagent for assaying a cell for the presence of at least one target protein associated with cellular locomotion.

56. The kit according to Claim 55, wherein said at least one target protein is a nucleus-associated ribbon-like structure protein.

57. The kit according to Claim 56 wherein said nucleus-associated ribbon-like structure protein is chosen from:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

58. The kit according to Claim 55, wherein said at least one target protein is a leading edge cellular locomotion protein.

59. The kit according to Claim 58 wherein said leading edge cellular locomotion protein is Neurotrophic tyrosine kinase receptor type 2 (NTRK2/TrkB).

60. The kit according to Claim 55, wherein said kit comprises reagents for assaying the presence and location of at least two different target proteins in a cell.

61. The kit according to Claim 60, wherein said kit comprises reagents for assaying a cell for the presence of a nucleus-associated ribbon-like structure.

62. The kit according to Claim 61, wherein said nucleus-associated ribbon-like structure comprises:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

63. The kit according to Claim 55, wherein said kit further comprises a chromatin function inhibiting agent.

64. The kit according to Claim 63, wherein said chromatin function inhibiting agent is a microtubule function inhibitor.

65. The kit according to claim 64, wherein said microtubule function inhibitor is a taxane.

66. The kit according to Claim 65, wherein said taxane is paclitaxel.

67. The kit according to Claim 65, wherein said taxane is a paclitaxel analog.

68. A composition comprising:

an agent that modulates the activity of at least one target protein associated with cellular locomotion ; and

a pharmaceutically acceptable delivery vehicle.

69. The composition according to Claim 68, wherein said at least one target protein is a nucleus-associated ribbon-like structure protein.

70. The composition according to Claim 69, wherein said nucleus-associated ribbon-like structure protein is chosen from:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

71. The composition according to Claim 68, wherein said at least one target protein is a leading edge cellular locomotion protein.

72. The composition according to Claim 71, wherein said leading edge cellular locomotion protein is Neurotrophic tyrosine kinase receptor type 2 (NTRK2/TrkB).

73. The composition according to Claim 68, wherein said composition comprises reagents for modulating the activity of at least two different target proteins in a cell.

74. The composition according to Claim 68, wherein said composition comprises at least one agent that inhibits the production of a nucleus-associated ribbon-like structure.

75. The composition according to Claim 74, wherein said nucleus-associated ribbon-like structure comprises:

Leukotriene B4 12-hydroxydehydrogenase (LTB4DH);

Pregnancy-induced growth inhibitor (OKL38);

Hs.516830 (C20orf139);

cyp4 proteins; and

Tripartite-containing motif 29 (TRIM29).

76. The composition according to Claim 68, wherein said composition further comprises a chromatin function inhibiting agent.

77. The composition according to Claim 76, wherein said chromatin function inhibiting agent is a microtubule function inhibitor.

78. The composition according to claim 77, wherein said microtubule function inhibitor is a taxane.

79. The composition according to Claim 78, wherein said taxane is paclitaxel.

80. The composition according to Claim 78, wherein said taxane is a paclitaxel analog.